ABSTRACT

A glitch free self-correcting clock switching mechanism operative to switch between two clocks in a glitch free manner while compensating for the ambiguity inherent in the switching operation. During the switching from fast to slow clock domains the mechanism measures the uncertainty or ambiguity of the first slow clock cycle duration during the switching operation and stores this value. At some time later, during the slow to fast clock switching the clock switch mechanism compensates for the metastability of the first slow clock cycle during fast to slow switching using the ambiguity value previously measured. In this manner the fast and slow clocks are switched between each other in a glitch-free and self compensating manner.